

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

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|---|-----------------|
| Patent Department (TR-E) | |
| Case 21810 | Int.-Nr. |
| Literatur erfasst: | Zeichen: Datum: |
| Litsheet Endnote <input checked="" type="checkbox"/> | SOP 19.04.2004 |

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|-----------------------------------|-----|
| Roche Diagnostics GmbH | |
| Patent Department (TR-E) Penzberg | |
| BK | WN |
| BUR | WJ |
| HH | HIL |
| | JB |
| | MI |
| | SR |

(PCT Article 18 and Rules 43 and 44)

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|--|--|---|---|
| Applicant's or agent's file reference 21810 WO-HH | FOR FURTHER ACTION | | see Form PCT/ISA/220 as well as, where applicable, item 5 below. |
| International application No. PCT/EP2004/003457 | International filing date (day/month/year) 01/04/2004 | (Earliest) Priority Date (day/month/year) 04/04/2003 | |
| Applicant ROCHE DIAGNOSTICS GMBH | | | |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 9 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. Certain claims were found unsearchable (See Box II).

3. Unity of invention is lacking (see Box III).

4. With regard to the title,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the abstract,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 4.

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b. none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT**Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)**

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:
 - a. type of material
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material
 - in written format
 - in computer readable form
 - c. time of filing/furnishing
 - contained in the international application as filed
 - filed together with the international application in computer readable form
 - furnished subsequently to this Authority for the purpose of search
2. In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional comments:

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International Application No

PCT/EP2004/003457

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, EMBASE, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|--|-----------------------------------|
| X | US 6 150 107 A (MATHIES RICHARD A ET AL) 21 November 2000 (2000-11-21) | 1-9, 13, 14 10-12, 15-17 |
| Y | abstract column 2, line 1 - column 2, line 28 examples 1-5 claims 1-28 figures 1-8 | -/- |

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

30 September 2004

13/10/2004

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|--|----------------------------------|
| X | US 6 177 247 B1 (JU JINGYUE ET AL) 23 January 2001 (2001-01-23) | 1-9,13, 14 10-12, 15-17 |
| Y | abstract column 2, line 11 - column 2, line 34 column 3, line 46 - column 4, line 16 column 5, line 32 - column 5, line 45 column 6, line 13 - column 6, line 22 column 7, line 18 - column 7, line 21 example 1 claims 1-45 ----- | |
| X | US 5 869 255 A (JU JINGYUE ET AL) 9 February 1999 (1999-02-09) | 1-9,13, 14 10-12, 15-17 |
| Y | abstract claims 1-20 figures 1,3 ----- | |
| X | VET J A M ET AL: "Multiplex detection of four pathogenic retroviruses using molecular beacons" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE, WASHINGTON, US, vol. 96, 1999, pages 6394-6399, XP002145609 ISSN: 0027-8424 | 1-9,13, 14 |
| Y | abstract page 6339, left-hand column figures 1,2 ----- | 10-12, 15-17 |
| X | JU J ET AL: "DESIGN AND SYNTHESIS OF FLUORESCENCE ENERGY TRANSFER DYE-LABELED PRIMERS AND THEIR APPLICATION FOR DNA SEQUENCING AND ANALYSIS" ANALYTICAL BIOCHEMISTRY, ACADEMIC PRESS, SAN DIEGO, CA, US, vol. 231, no. 1, 10 October 1995 (1995-10-10), pages 131-140, XP000536518 ISSN: 0003-2697 | 1-9,13, 14 |
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| X | "Rotor-Gene 3000 Four-Channel Multiplexing System" ANNOUNCEMENT CORBETT RESEARCH, XX, XX, 2002, pages 1-8, XP002264359 | 15-17 |
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| Y | US 6 369 893 B1 (CHANG RONALD ET AL) 9 April 2002 (2002-04-09) abstract column 3, line 41 - column 5, line 42 | 1-17 |
| Y | WO 97/46714 A (RASMUSSEN RANDY P ; UNIV UTAH RES FOUND (US); RIRIE KIRK M (US); WITTW) 11 December 1997 (1997-12-11) abstract page 4, paragraph 3 - page 22 examples 5-9 claims 1-126 | 1-17 |
| Y | US 6 197 520 B1 (BERNARD PHILIP ET AL) 6 March 2001 (2001-03-06) the whole document | 1-17 |
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| Y | PALLADINO SILVANO ET AL: "Real-time PCR for the rapid detection of vanA and vanB genes." DIAGNOSTIC MICROBIOLOGY AND INFECTIOUS DISEASE. JAN 2003, vol. 45, no. 1, January 2003 (2003-01), pages 81-84, XP002298326 ISSN: 0732-8893 the whole document | 1-17 |
| A | MATTHEWS J A ET AL: "ANALYTICAL STRATEGIES FOR THE USE OF DNA PROBES" ANALYTICAL BIOCHEMISTRY, ACADEMIC PRESS, NEW YORK, NY, US, vol. 169, no. 1, 15 February 1988 (1988-02-15), pages 1-25, XP000670180 ISSN: 0003-2697 the whole document | 1-17 |
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| A | MARRAS SALVATORE A E ET AL: "Efficiencies of fluorescence resonance energy transfer and contact-mediated quenching in oligonucleotide probes." NUCLEIC ACIDS RESEARCH. 1 NOV 2002, vol. 30, no. 21, 1 November 2002 (2002-11-01), page e122, XP002298327 ISSN: 1362-4962 the whole document ----- | 1-17 |

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